

**Synonymy of *Platicrista cheleusis*
(Tardigrada: Eutardigrada: Hypsibiidae)**

R. Deedee Kathman and Clark W. Beasley

(RDK) Aquatic Resources Center, P. O. Box 680818, Franklin, Tennessee 37068 U.S.A.;
(CWB) Department of Biology, McMurry College, Abilene, Texas 79697 U.S.A.

Abstract.—The eutardigrades *Platicrista cheleusis* Kathman 1990 and *Diphascon craigi* Beasley 1990 are declared to be synonymous based on examination of the specimens from both authors.

Pilato (1987) revised the genus *Diphascon* Plate, 1889 and subdivided it into four genera: *Hebesuncus*, *Diphascon*, *Mesocris-ta*, and *Platicrista*. Characteristics of the bucco-pharyngeal apparatus were used to establish these new genera, as there tends to be little variability in these apparatus in genera. *Diphascon* is separated from *Platicrista* by the following characters: in *Diphascon* the apophyses for the insertion of the stylet muscles are shaped like semilunar hooks, the furcae have thickened processes at the apices, the pharyngeal tube is longer than the buccal tube, and the stylet supports are inserted between half and three-quarters of the buccal tube length; in *Platicrista* the apophyses are in the shape of wide and flat ridges, the furcae are arch-shaped and taper at their apices, the pharyngeal tube is as long as or slightly shorter than the buccal tube, and the stylet supports are inserted at the end of the buccal tube.

Although the four genera established by Pilato (1987) are accepted today, confusion surrounding the descriptions and placement of species within these genera led some authors to continue to use only the name *Diphascon* of Plate, 1889, for several years. In 1990, Beasley described a new species of tardigrade from Colorado, USA, as *Diphascon craigi*. In that same year, Kathman described *Platicrista cheleusis* from British Columbia Canada.

The two descriptions of the holotypes, both deposited in the U.S. National Muse-

um (USNM 234018 and USNM 234019), are very close, although there are some differences. The specimens from British Columbia did not have eyes, whereas those from Colorado did, although they are no longer apparent in the preserved material. The presence of eyes appears to be a variable trait, with eyes apparent during certain times of the year in the same species from the same location (pers. obs., senior author; pers. comm., D. R. Nelson, East Tennessee State University, Johnson City, Tennessee). The reason for such variability has not been investigated. Kathman (1990) states that there are “two cuticular bars on first three pairs of legs, one beside the external claw and the other at the base between the internal and external claws”. Her drawing, however, indicates that the first of these bars is beside the internal claw, which is the correct position. In describing the two macroplacoids, Beasley (1990) states “first (4.8 μ) shorter than the second (22.3 μ)”. His drawing suggests that the first length is probably erroneous; rather, the first is slightly more than twice as long as the second, based on the description of the paratypes, as well as new measurements of specimens from both collections. The other differences in measurements of various characters of the holotypes are most likely a result of the differences in size of the two animals (688 μ m versus 530 μ m length). Although Beasley found all six specimens

from Colorado above 2900 m, Kathman found her 14 specimens from 150–1540 m.

Examination of specimens from both collections reveals the same cuticular patterning, although the decrease in size of the polygons in the cuticle from the anterior to posterior end is more noticeable in the specimens from British Columbia. In some specimens it is difficult to detect any change in size posteriorad. The sclerotized bar under the claws of the fourth pair of legs is variable among specimens, sometimes small and occurring between the two claws (as described by Kathman) and sometimes extending under the internal claw and reaching the middle of the bottom of the external claw. Perhaps this variability is a result of the stage of development of the tardigrade.

Beasley and Kathman have determined that the two species are synonymous. According to the rules of priority of the International Code of Zoological Nomenclature, the correct name is that of Kathman (1990), which appeared in publication several weeks prior to that of Beasley (1990).

It is interesting to note differences that appear to be due to the preservation techniques. The two sets of specimens were

prepared and mounted in two different media—the ones from British Columbia were removed directly from water and placed in Hoyer's medium, while those from Colorado were fixed in Cuénot's fixative, dehydrated in glycerin and mounted in Faure's liquid. Several years later, the reticulated cuticle is barely visible in Hoyer's, while it is fairly distinct in Faure's. However, the eyes are no longer visible in the Colorado specimens. The sclerotized parts, such as the furcae, stylets and other mouthparts have been better preserved in Hoyer's.

Literature Cited

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